REMARKS

Summary

Claims 1-5 were pending. Claims 4 and 5 have been canceled, Claims 1-3 have been amended and Claims 7-10 have been added. The amendment for Claims 1-3 and new Claims 7-10 includes strikethroughs for deleted matter and underlines for added matter in attached Appendix A. The amendment to these claims are supported in the specification. No new matter has been added.

In the Drawings

The Examiner objected to Fig.10. Applicants have submitted a corrected drawing as shown on the substituted sheet with the proposed changes marked in red. No new matter has been added. Applicant will submit a formal drawing once the Examiner has approved the corrected drawing.

Rejection of Claims

35 U.S.C. §102

The Examiner rejected Claims 1-3 under 35 U.S.C. § 102(b) as being anticipated by Japanese Pub. No. 06-67032. Applicants have amended Claim 1 and submit that Claim 1 is not anticipated by the reference cited by the Examiner. Applicants respectfully traverse this rejection.

Amended Claim 1 recites, "chamfering a peripheral portion of clad of the core end face of the plastic optical fiber end to remove said peripheral portion of clad of the core end face."

The method of Claim 1 provides a way to remove a peripheral portion of the clad of the core end face of the plastic optical fiber by utilizing a chamfering process. This method provides the user with a simple technique to remove the peripheral portion of the clad of the core end face from the plastic optical fiber so the core end face is not hindered from having a finished in a mirror-surface fashion. In addition, by removing the peripheral portion of the clad of the core end face of the plastic optical fiber the user is provided with the ability to protect the optical fiber from deterioration.

In contrast to Claim 1, the Japanese Pub. No. 06-67032 reference does not

anticipate, suggest or disclose a method for removing a peripheral portion of the clad of the core end face of the plastic optical fiber by using a chamfering process. In particular, this reference discloses a mirror-plane heating component 33 set at a low softening temperature while it is pushed by a movable member 40 towards an optical fiber F to soften an end face of this optical fiber. (Paragraph 22, lines 1-4 and paragraph 23, lines 1-6). Thus, this Japanese reference discloses a method to soften an end face of an optical fiber, but it does not disclose a method for removing a peripheral portion of the clad of the core end face of the plastic optical fiber by using a chamfering process.

Therefore, the Japanese reference's method for softening the end face does not provide the user with a straightforward and effective method to remove the peripheral portion of the clad of the core end face of the plastic optical fiber in order for the core end face not to be hindered from being finished in a mirror-surface fashion. In addition, this reference does not provide the user with the ability to remove the peripheral portion of the clad of the core end face from the plastic optical fiber to protect the optical fiber from deterioration.

For the foregoing reasons, Claim 1 is not anticipated by Japanese Pub. No. 06-67032. Claims 2 and 3 depend from independent Claim 1. Therefore, Claims 2 and 3 are not anticipated by Japanese Pub. No. 06-67032 as claims dependent upon an allowable base claim. Applicants request the Examiner withdraw the rejections of Claims 1-3.

35 U.S.C. §103

Claim 4

In the Office Action, the Examiner rejected Claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Japanese Pub. No. 06-67032 as applied to Claims 1-3 above, and further in view of Yamamura et al. (U.S. Patent No. 5,770,132). Applicants have canceled Claim 4 and incorporated the features of Claim 4 into amended Claim 1.

Applicants respectfully submit that the cited references, either individually or in combination, do not describe or suggest the elements of amended Claim 1. Therefore, amended Claim 1 is not obvious from Japanese Pub. No. 06-67032 in view of

Yamamura et al, because Yamamura et al. does not overcome any of the problems associated with Japanese Pub. No. 06-67032.

Claim 5

In the Office Action, the Examiner rejected Claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Japanese Pub. No. 06-67032 and Yamamura et al. as applied to Claims 1-4 above, and further in view of Luther et al. (U.S. Patent No. 5,996,485). Applicants have canceled Claim 5 and incorporated the features of Claim 5 into amended Claim 1.

Applicants respectfully submit that the cited references, either individually or in combination, do not describe or suggest the elements of amended Claim 1. Therefore, amended Claim 1 is not obvious from Japanese Pub. No. 06-67032 and Yamamura et al. in view of Luther et al, because Luther et al. does not overcome any of the problems associated with Japanese Pub. No. 06-67032 and Yamamura et al.

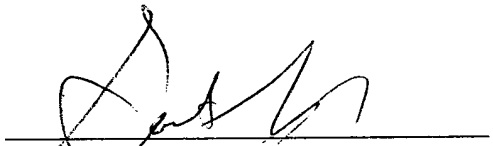
New Claims

Applicants have added new Claims 7-10. The specification supports the addition of the new claims. (Specification, page 15, lines 1-24 and page 16, lines 1-17) Since Claims 7-10 depend on allowable Claim 1, Claims 6-9 should also be allowable. No new matter has been added. Applicants respectfully request the Examiner to consider and allow the new claims.

Conclusion

Applicants submit that pending Claims 1-3 as amended and new Claims 7-10 are patentable. Therefore, in view of the above amendments, Applicants respectfully submit that this application is in condition for allowance and such action is earnestly requested. If for any reason, however, the Examiner feels that a telephone interview would be helpful in resolving any remaining issues the Examiner is respectfully requested to contact Applicants' undersigned attorney.

Respectfully submitted,



Gustavo Siller Jr.
Registration No. 32,305
Attorney for Applicants

Dwayne L. Bentley
Registration No. 45, 947
Attorney for Applicants

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200

APPENDIX A
Serial No. 09/611,717
PLASTIC OPTICAL FIBER END FACE TREATMENT METHOD AND TREATMENT DEVICE

In the Specification

Please replace page 2, lines 5-14 with the following paragraph as follows:

"Herein, generally as shown in FIG. 10, a plastic optical fiber 50 comprises a core 51 consisting of high purity polymethacrylate resin (PMMA) disposed at the center, a clad 52 consisting of special fluororesin that covers peripheral surface of the core 51, and a jacket (cover) that covers the peripheral surface of the clad 52. A light that enters from the one core end face of the core 51 emitted from a light source ~~60~~ 70 is totally reflected on the boundary between the core 51 and clad 52, and comes out from the other core end face."

In the Claims

Please cancel Claims 4 and 5, rewrite Claims 1-3 and add Claims 7-10 as follows:

1. (Twice Amended) A plastic optical fiber end face treatment method comprising: ~~in which a~~ pressing a core end face of a plastic optical fiber end intermittently on a mold heated to a certain temperature to soften and fuse the core end face and thereby transfer a transfer face of the mold on the core end face;

removing a cover of the plastic optical fiber end to expose the core end face; and

chamfering a peripheral portion of clad of the core end face of the plastic optical fiber end to remove said peripheral portion of clad of the core end face.

2. (Twice Amended) A The plastic optical fiber end face treatment method as claimed in Claim 1 further comprising:

~~pressing the core end face of the plastic optical fiber end on the transfer face of a heated mold~~ separating the core end face from the mold and cooling the core end face naturally, and

intermittently repeating the pressing/separating between the core end face and the transfer face of the mold to deform a shape of the core end face gradually and to transfer the transfer face of the mold.

3. (Twice Amended) The plastic optical fiber end face treatment method as claimed in Claim ~~2~~ 1, wherein the core end face is formed in a lens face shape.

7. (New) The plastic optical fiber end face treatment method as claimed in Claim 2, wherein the core end face is formed in a lens face shape.

8. (New) The plastic optical fiber end face treatment method as claimed in Claim 1, wherein chamfering further comprises cutting the peripheral portion of the clad of the core end face.

9. (New) The plastic optical fiber end face treatment method as claimed in Claim 7, wherein cutting the core end face further comprises utilizing a cutter to cut the peripheral portion of the clad of the core end face.

10. (New)The plastic optical fiber end face treatment method as claimed in Claim 1, wherein chamfering further comprises applying a grinding stone to the clad to remove the peripheral portion of the clad of the core end face.